

Appl. No. : 09/844,959  
Filed : April 27, 2001

## REMARKS

Claims 11-14 are pending in this application. Claims 1-10 were canceled in a previous amendment.

### Claim Rejections - 35 U.S.C. § 102(e)

Claims 11-14 have been rejected under 35 U.S.C. §102(e) as anticipated by U.S. 6,066,577 (hereinafter “Cooney et al.”). “A rejection for anticipation under section 102 requires that each and every limitation of the claimed invention be disclosed in a single prior art reference.” *See, e.g., In re Paulsen*, 31 USPQ2d 1671 (Fed. Cir. 1994). Cooney et al. does not disclose every element of Applicants’ claims, and therefore cannot be considered as an anticipating reference under 35 U.S.C. § 102(e).

The pending independent claim recites an integrated circuit comprising, *inter alia* “*a hard mask layer ... comprising a patterned organic polymer film wherein a portion of the patterned organic polymer film is fluorinated.*” Cooney et al. only discloses an inorganic fluorine rich insulator layer formed by doping a conventional silicon dioxide or amorphous carbon layer with fluorine. The layer is formed by *in situ* doping with a fluorine source, e.g.,  $\text{Si}_x\text{F}_y$  or  $\text{C}_x\text{F}_y$  (where  $x$  and  $y$  are positive values). The layer that is doped with fluorine is not an organic polymer film, and the doping process, even one employing a fluorine source comprising  $\text{C}_x\text{F}_y$ , does not yield an organic polymer film.

Thus Cooney et al. does not disclose a hard mask layer comprising a patterned organic polymer film wherein a portion of the patterned organic polymer film is fluorinated, and therefore cannot anticipate Claims 11-14. Accordingly, Applicants respectfully request that the rejection be withdrawn.

### Claim Rejections - 35 U.S.C. § 102(e)

Claim 12 has been rejected under 35 U.S.C. §102(e) as anticipated by U.S. 6,309,956 (hereinafter “Chiang et al.”). Chiang et al. does not disclose every element of Applicants’ claims, and therefore cannot be considered as an anticipating reference under 35 U.S.C. § 102(e).

Chiang et al. only discloses the use of organic low-K materials in insulating structures. Chiang et al. does not disclose a hard mask layer comprising a patterned organic polymer film wherein a portion of the patterned organic polymer film is fluorinated. Chiang et al. therefore does not include disclosures sufficient to overcome the deficiencies of Cooney et al. Accordingly, Applicants respectfully request that the rejection be withdrawn.

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**Conclusion**

In view of the foregoing remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns that might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number below.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 4/20/04

By:



Rose M. Thiessen  
Registration No. 40,202  
Attorney of Record  
Customer No. 20,995  
(619) 235-8550

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